# A snapshot of Community Supported Agriculture in Australia and Aotearoa New Zealand 2018

## Preliminary descriptive results

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2019

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## Acknowledgements

The author wishes to extend her sincere thanks to each of the participants for their generosity in sharing their time, insights, and perspectives that enabled this study; she also wishes to thank those invitees who declined to complete the survey however still generously shared their perspectives and reasons for wishing not to do so, which provided valuable insights. Enormous thanks also go to each of the following people (alphabetically by surname) for their valuable contributions during the design and delivery phases of the survey: Glenn Althor, Rebecca Colvin, Robert Dyball, Tammi Jonas, Joel Orchard, Ginny Sargent, Sally Ruljancich, and Garrett Ziegler.

The study was conducted with ethical approval from The Australian National University's Humanities and Social Sciences Delegated Ethics Review Committee (Protocol 2018/627). This report forms part of a PhD project that is supported by the Australian Government Research Training Program (RTP) Scholarship.

## Disclaimer

This report contains results of a research survey, conducted by the author, which are still subject to analysis. The report is provided for the interest of participants in the survey and for the CSA community, and while all reasonable efforts have been made by the author to ensure that the content of the report is accurate, readers should not rely solely on data contained within this report. It is the author's intention that the content will contribute towards a PhD thesis and may be the subject of future peer-reviewed publications.

## Suggested citation

Wilkes, B.A., 2019, *A snapshot of Community Supported Agriculture in Australia and Aotearoa New Zealand 2018*, Canberra, http://hdl.handle.net/1885/164046.

# Contents

# Executive summary

This report describes the responses received to a survey of Community Supported Agriculture (CSA) farms in Australia and Aotearoa New Zealand in 2018. In this executive summary, key findings are highlighted, though for a more complete picture of the findings please refer to the full report on the following pages.

The majority of respondent CSAs had been operating for three years or fewer at the time of the survey, and the earliest had been operating since 2004. All respondents reported that their CSA had been initiated by farmers. The number of members in each respondent CSA ranged from 3 to 135, with a median of 26 members. Farm sizes among respondent CSAs ranged from 0.2 hectares to over 2400 hectares, with the median area of land devoted to CSA production being 2 hectares.

Various different types of produce were exchanged by respondent CSAs, of which a majority included vegetables and/or fruit in their shares (64%), and a considerable proportion had shares that included meat (39%). Regenerative, agroecological, and organic farming methods featured prominently among respondents, with 79% describing their methods as organic (either certified or non-certified), 61% describing their methods as regenerative, and 36% describing their methods as agroecological. All respondents used at least one of the following terms to describe their farming methods: organic, regenerative, agroecological, or permaculture.

The minimum period of commitment that members made to respondent CSAs ranged from four weeks to 12 months, the most frequent being three months. Just over one third (36%) of respondents reported having a written agreement that members commit to, and a further 18% indicated they were planning to introduce one. The majority of respondents did not have members contributing labour to on-farm operations, administration, or distribution, and none reported having formal groups of members (such as a 'core group' or 'steering committee'). However, several reported incorporating input from members about produce preferences, two respondents indicated that members had self-organised into groups that routinely shared collection activities among themselves, and one respondent had some members who paid for their share with regular in-kind labour.

Approaches to risk sharing varied among respondents, both in terms of interpretation of what risk sharing means, and preparedness to share both scarcity and abundance with members. While a majority (79%) reported the contents of their CSA shares varied with seasonal scarcity and/or abundance, several indicated a reluctance to share scarcity, but willingness to share abundance, and some respondents indicated greater willingness to share unexpected lack of diversity of produce rather than lack of amount of produce.

On several aspects of their farm (including financial, workload, community involvement, and environmental aspects), considerably more respondents found that CSA improved their situation than worsened it. The greatest improvements that respondents experienced from CSA were in ability to meet annual operating costs, farmer quality of life, and community involvement. Personal connection and support from members featured strongly among the rewards of CSA identified by respondents. Farmer workload in terms of the amount of work (rather than the variety of work) returned one of the lower levels of satisfaction overall, and was an aspect in which respondents were varied in their perspectives of CSA impact: whilst some found CSA improved or greatly improved farmer workload (amount), others found CSA worsened or strongly worsened their workload amount. Understanding this diversity in experience would be a priority for future study.

About the survey method: Twenty-eight survey responses were received (78% response rate) during late 2018 from farms that self-described as practicing CSA in Australia and Aotearoa New Zealand, where their farm produce is exchanged directly with eaters (without the presence of an intermediary) and in which risks and rewards of farming are explicitly shared with eaters.

# 1 Introduction

This report presents preliminary descriptive results from a survey of Community Supported Agriculture (CSA) Farms in Australia and Aotearoa New Zealand in 2018. The survey aimed to gather characteristics of CSA farms operating in the region to capture a point-in-time snapshot. The survey was *not* intended to provide detailed qualitative information regarding the CSA experience in the region, which instead is anticipated to be explored in a future series of interviews with CSA farmers and eaters to complement this survey.

This report is a working paper prepared for the interest of the survey participants and the CSA community in Australia and Aotearoa New Zealand. It is the author's intention to prepare additional publications based on further analysis of these results and additional qualitative data gathered separately.

# 2 Methods

## 2.1 Survey instrument development

Survey data was collected using an online questionnaire instrument developed by the author using multiple existing sources. The instrument was constructed based on questionnaires that have been used previously to survey CSA farms in Europe and the United States of America in relation to various aspects, including farm characteristics, produce types, production and distribution methods, farm labour, and farmer perspectives. Questions were drawn from the following and adapted to suit the regional context:

- Urgenci SolidBase project's survey *Financial sustainability of Community Supported Agriculture (CSA) in Europe,* accessed in July 2018 from: https://questionnaires.urgenci.net/index.php/139785
- Lass, D., Bevis, A., Stevenson, G.W., Hendrickson, J., & Ruhf, K. (2002) *Community Supported Agriculture Entering the 21st Century: Results from the 2001 National Survey*, accessed in July 2018 from: https://www.cias.wisc.edu/wp-content/uploads/2008/07/csa_survey_01.pdf
- Paul, M. (2016) *Farmer Perspectives on Livelihoods Within Community Supported Agriculture*, Economics Department Working Paper Series 212, accessed in August 2018 from https://scholarworks.umass.edu/econ_workingpaper/212
- *Michigan Statewide CSA Survey 2018*, instrument provided to the author by Garrett Ziegler, Community Food Systems and Sustainable Tourism Educator, Michigan State University Extension.

Additional questions were included based on the following instruments and reports from the Australian Bureau of Statistics (ABS) and the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), as accessed during August 2018, in order to support comparisons between results where possible:

- ABARES 2015-16 Labour Force Survey, accessed from http://www.agriculture.gov.au/abares/research-topics/labour/labour-force-survey
- ABS Rural Environment and Agricultural Commodities Survey 2016-17, accessed from http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/7476DDE5F35EA87FCA2582B70014FDA2/$File/sample%20form.pdf
- ABS 2016 Census of Population and Housing, Census Dictionary, accessed from http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/4D2CE49C30755BE7CA2581BE001540A7/$File/2016%20census%20dictionary.pdf

Several further questions were included to explore social identity concepts, based on pictorial measures developed by Schubert and Otten, known as the Overlap of Self, Ingroup, and

Outgroup (OSIO) items.[1] These pictorial items are based on the notion that spatial metaphors strongly feature in the language that humans use to describe our relationship to groups.

Draft versions of the instrument were piloted with CSA farmers and academic advisors, for feedback on terminology, salience, and structure. Feedback received during piloting was used to make minor modifications to question wording and sequencing, as well as streamlining the structure of the questionnaire.

## 2.2 Sampling and data collection

Purposive sampling was undertaken by inviting farms that self-describe as practicing CSA in Australia and Aotearoa New Zealand, including those listed on the public directory hosted on the CSA Network Australia and New Zealand website (www.csanetworkausnz.org) and others identified through an internet search, with a total of 36 CSAs identified. Invitees were also asked to advise the researcher of other farms practicing CSA who they thought should be invited to participate. Invitations to participate were sent to the 36 identified CSAs via e-mail or website contact forms. Follow up e-mails, text messages and phone-calls were made by the author, using publicly available contact details, to confirm receipt of the invitation and encourage participation.

The questionnaire was delivered online using the Qualtrics Survey platform, with unique survey links for each participant to prevent duplicate responses. Completed questionnaires were submitted by 28 respondents, giving a response rate of 78%. One invitee explicitly declined to participate, providing reasons for non-response relating to concerns with the definition of CSA being used in the survey—*an arrangement in which the farm exchanges produce directly with eaters (i.e. not through an intermediary), and in which risks and rewards of farming are explicitly shared with eaters*. One invitee who did not submit a response indicated hesitance due to being in the process of ceasing farming altogether, and not wishing to contribute sentiments resulting from their experience. A further 6 invitees neither submitted responses nor provided reasons for non-response.

Responses were received from farms across six states of Australia, and from Aotearoa New Zealand. Of the Australian respondents, the majority were from Victoria and New South Wales.

Raw data was exported from Qualtrics and analysed using R Studio (Version 1.1.463) and Microsoft Excel (version 15.37) software. Data visualisations were developed in R Studio (Version 1.1.463) using the ggplot2 package.

# 3 Results

The results of the survey are presented in this section, commencing with a description of the participating farms, followed by details of their CSA structure and operations, and then characteristics of CSA farmers in participating CSAs. The final part of this section presents sentiments of participating farmers about their farm generally as well as the impact of their CSA operation, including quantitative assessments of various aspects, and qualitative descriptions of the rewards and challenges they experience with CSA.

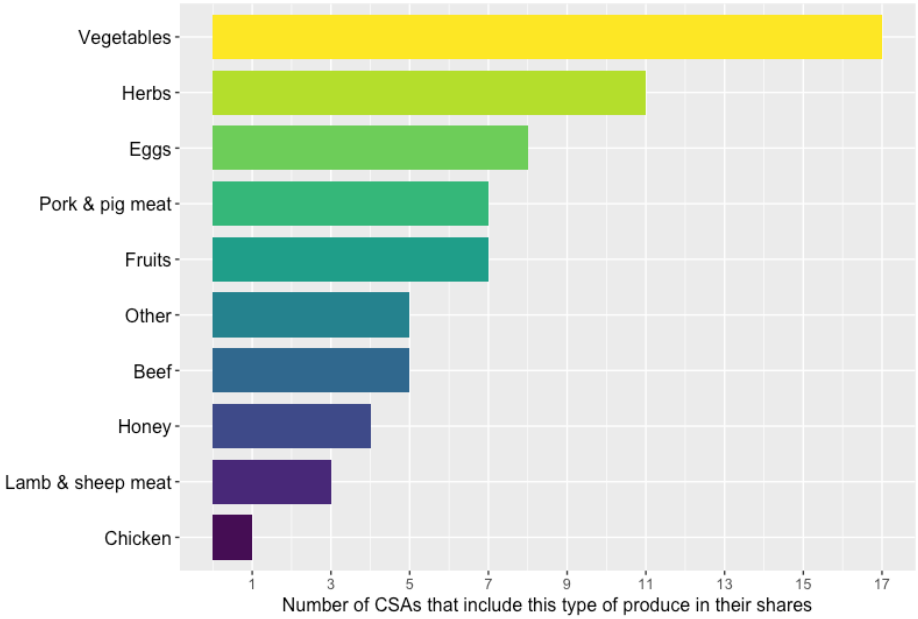
[1] Thomas W. Schubert and Sabine Otten, "Overlap of Self, Ingroup, and Outgroup: Pictorial Measures of Self-Categorization," *Self and Identity* 1, no. 4 (October 2002): 353–76, https://doi.org/10.1080/152988602760328012.

## 3.1 Farm characteristics

### Produce types

Various types of produce are exchanged via CSA in Australia and Aotearoa New Zealand. Figure 1 and Table 1 present the types and categories of produce exchanged by respondents as part of their CSA, along with the numbers and percentages of total respondents that include each type of produce in their CSA shares (many CSAs include more than one type of produce in their CSA shares).

*Figure 1. Types of produce exchanged by respondents as part of CSA shares*




*Note: Participants who selected 'Other' category specified the following in their descriptions: wine, turkey, garlic, kim chi, flowers.*

*Table 1. Types and categories of produce included in CSA shares – by percentage of respondents*

| Produce type | Percentage (number) of respondents with this produce type in their CSA shares (n = 28) |
|---|---|
| Meat (total) | 39% (11) |
| Pork & pig meat | 25% (7) |
| Beef | 18% (5) |
| Lamb & sheep meat | 11% (3) |
| Chicken | 4% (1) |
| Turkey | 4% (1) |
| Vegetables, Fruit & Herbs (total) | 64% (18) |
| Vegetables | 61% (17) |
| Herbs | 39% (11) |
| Fruit | 25% (7) |
| Eggs | 29% (8) |
| Honey | 14% (4) |
| Wine | 4% (1) |

Various combinations of produce are exchanged by the respondent CSAs. While most respondents could be categorised as either meat CSAs or vegetable/fruit CSAs, one CSA reported including both meat and vegetables as part of their CSA shares. Notably, 39% of respondents reported supplying some form of meat as part of their CSA, and 45% of those meat CSAs farmed more than one type of animal. Vegetables are included in CSA shares by

61% of respondents. One quarter of respondents supply fruit as part of their CSA—one was exclusively fruit whereas the others included fruit along with vegetables. In total, 64% of respondents included vegetables and/or fruits.

Herbs and honey were present in combination with vegetable/fruit shares, but not in shares on their own. Eggs were present in combination with both meat and vegetable/fruit shares, but not in shares on their own. One CSA reported include meat and wine in their CSA shares. Other items listed separately by respondents as being included in some CSA shares were: garlic, kim chi, and flowers.

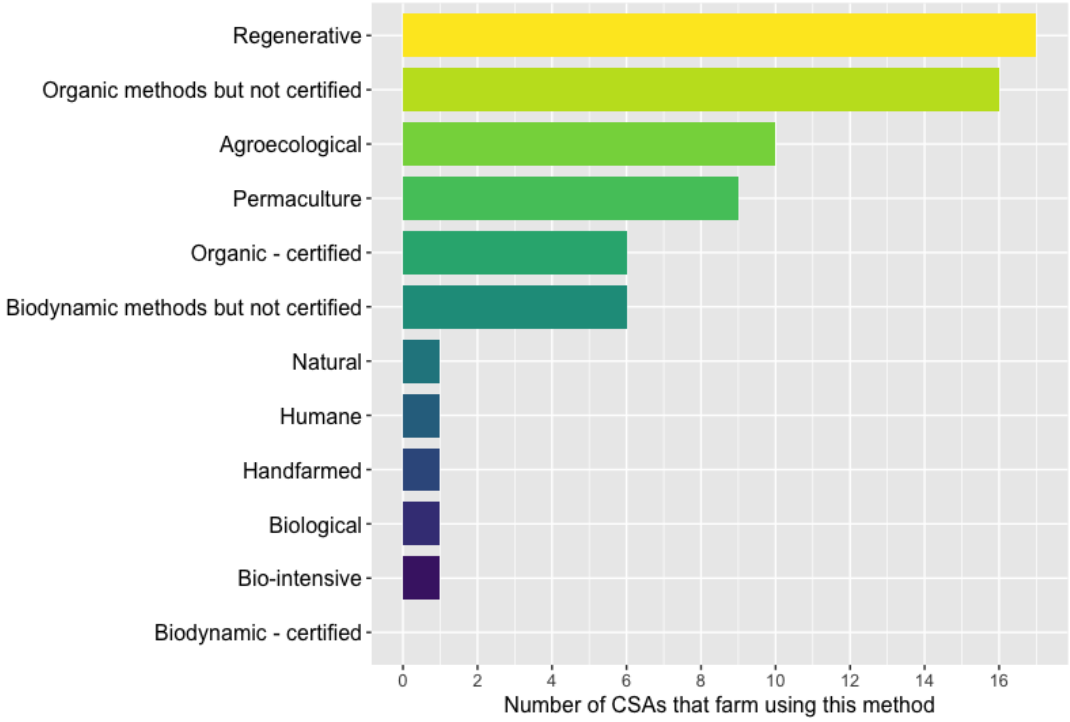
## Farming methods

Many respondents described using multiple farming methods (Figure 2), with the single most frequent being 'regenerative', used by 61% of respondents to describe their farming methods. Considering certified and non-certified organic methods together, a greater combined total of 79% of respondents described their methods as organic farming; this comprised 6 farms (21%) that were certified, and 16 farms (57%) that were using organic methods but not formally certified.

Of those farms who did not indicate that they use organic methods, certified or otherwise, all used one or more of the following terms to describe their farming methods: regenerative, agroecological, permaculture.

Other methods articulated by respondents include: "bio-intensive", "biological", "handfarmed (no tractors etc.)", "humane", and "natural".

*Figure 2. Farming methods used by respondent CSA farms*



## Farm land

Among the respondents, CSAs were operating on farms with total land area ranging from 0.2 to 2428 hectares (0.5 acre to 6000 acres), the distribution across this range is plotted in Figure 3. Whilst the majority of CSA farms are under 20 hectares in total area (68% were less than 20 hectares, and 32% were 20 hectares or more), more than one was above 1000 hectares, and several were between 100 – 200 hectares.

In terms of the amount of land devoted to production for CSA, respondents ranged from 0.08 to 1619 hectares (0.2 acres to 4000 acres), with a median of 2 hectares. The total area of land under production for CSA by respondents in Australia and Aotearoa New Zealand was 2007 hectares (4959 acres), comprising 1999 hectares (4940 acres) in Australia and 7.5 hectares (18.5 acres) in Aotearoa New Zealand.

As a proportion of the land under production, CSA land ranged from 0.08% to 100% among the respondent farms, with the majority above 75% as can be seen in the distribution in Figure 4.

*Figure 3. Distribution of CSAs by total land area of CSA farms (n = 28)*

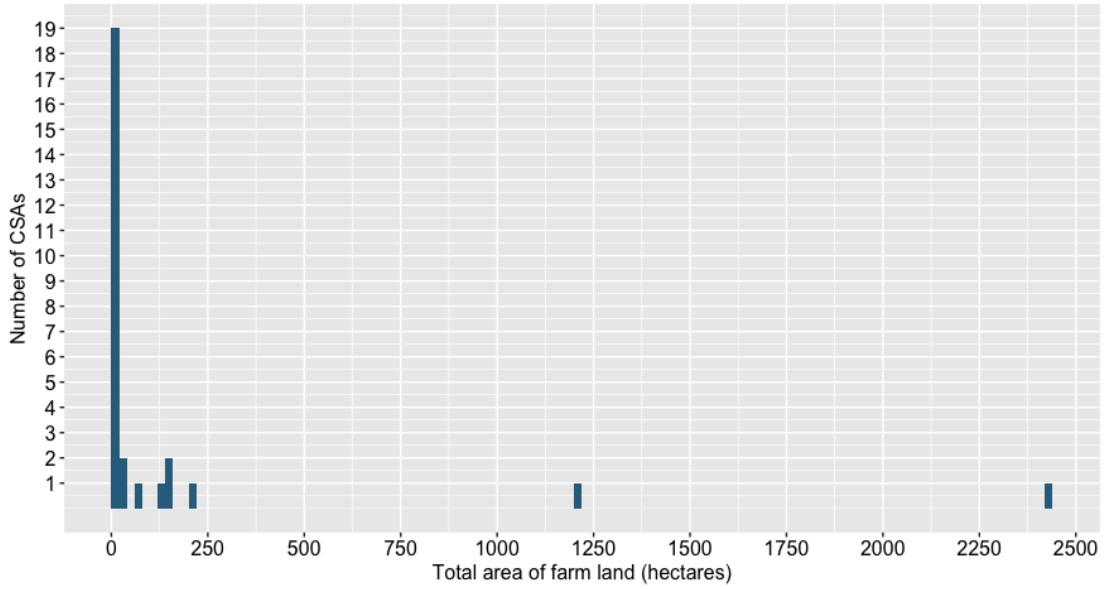
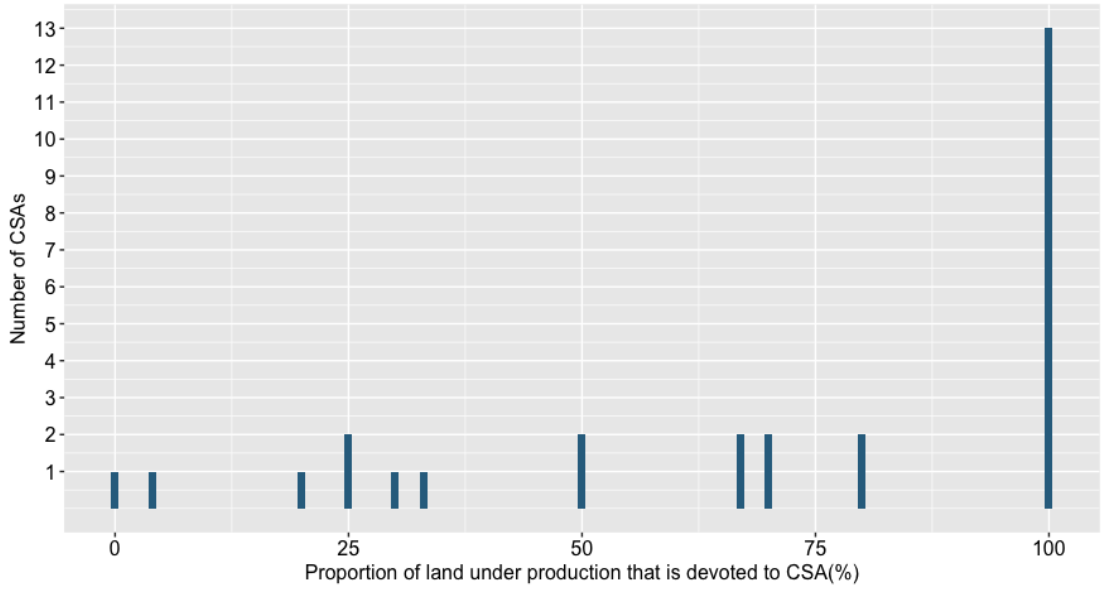



*Figure 4. Distribution of CSAs by proportion of land under production devoted to CSA (n = 28)*



Meat CSAs tend to have greater farm size in terms of total land area and, as can be seen in Figures 5a and 5b, greater area of land devoted to CSA, than non-meat CSAs.

*Figure 5a. Plot of CSA land area against number of members*
*(Data points marked by blue triangles are meat CSAs, green circles are non-meat CSAs.)*

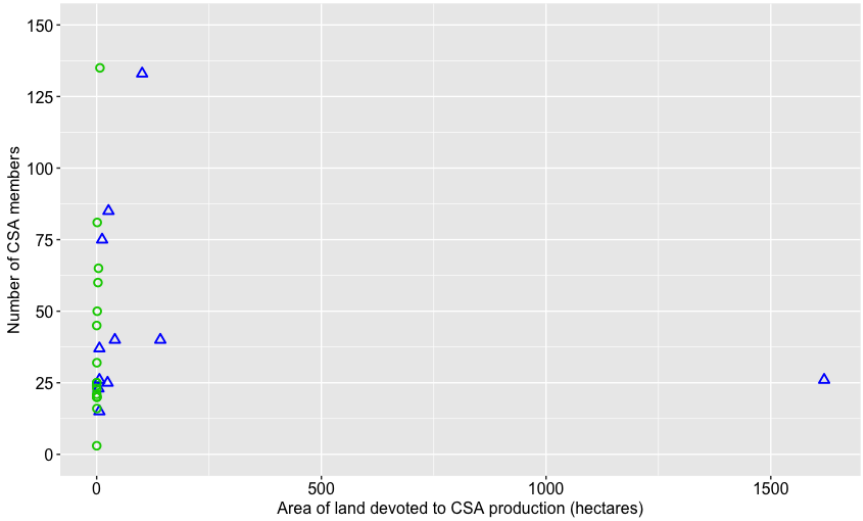
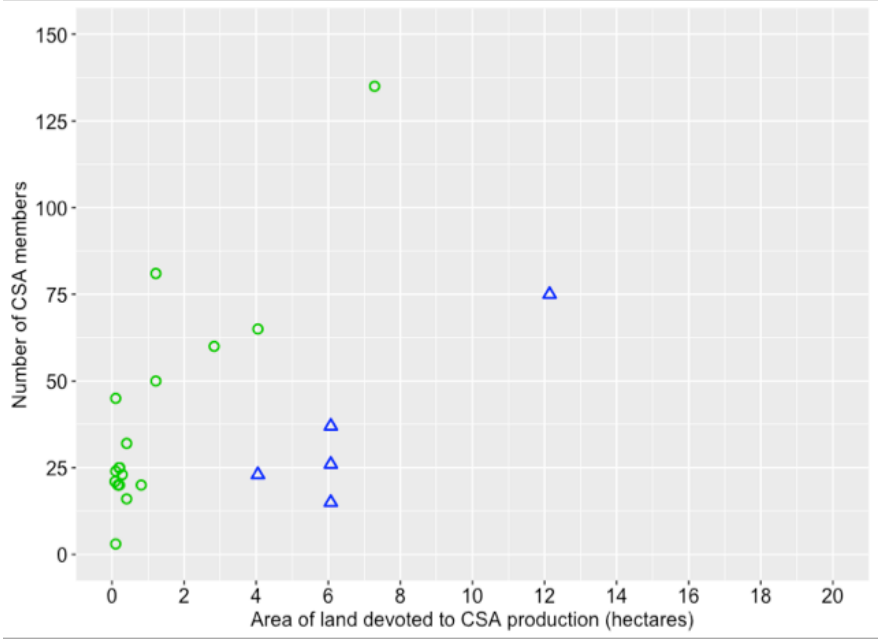



*Figure 5b. Expansion of x-axis of Figure 5a in 0-20 hectare range*




Respondents' predominant means of access to the land they farm was through 'ownership', with 68% indicating they 'own' all or part of the land they farm, 29% indicating they lease/rent some or all of the land they farm (7% indicated using a mix of land they 'own' and lease), and 14% indicating another form of land access agreement, including verbal agreement to use the land, and exchange of produce in return for land access.

## Exchange modes

Most respondents used multiple modes of exchange to trade their produce, with only one respondent stating CSA was their only mode of exchanging their farm's produce. Just under 30% of respondents exchanged their produce by one other mode in addition to CSA, and just under 70% of respondents exchanged their produce via two or more other modes in addition to CSA. The most frequent other mode of exchanging produce was direct to restaurants, with three quarters of respondents using this. Just under one-half reported selling produce at

farmers' markets (46% of respondents), and just over one-third had farm-gate sales (36% of respondents). Four CSA farms also reported running produce box schemes, and one farm engaged in produce/services exchange.

## Labour on farm

About 80% of respondent farms reported that workers other than the owners also contributed labour to their overall operations in the previous financial year (2017-18): approximately 20% had a least one permanent employee, approximately 30% had at least one casual employee, approximately 10% had at least one seasonal employee, approximately 30% had apprentices/interns/WWOOFers, and approximately 20% had family/friends/volunteers contribute labour to the farm. The question did not reveal the nature or extent of the contributed labour.

One farm reported that three of their CSA members had contributed labour to their operations in the previous financial year (2017-18).

## Proportion of total farm income from CSA

There was wide variation among respondents in the proportion of total farm income that came from CSA in the 2017-18 financial year, with a range of 2 – 100%, and a median of 50%. Figure 6 shows that there were equal percentages of respondents (approximately 23%) in each of the first three quartiles of 'CSA contribution to total farm income', with slightly more (approximately 31%) earning more than 75% of their total farm income from CSA.

*Figure 6. Distribution of CSA income as a proportion of total farm income (n=26)*

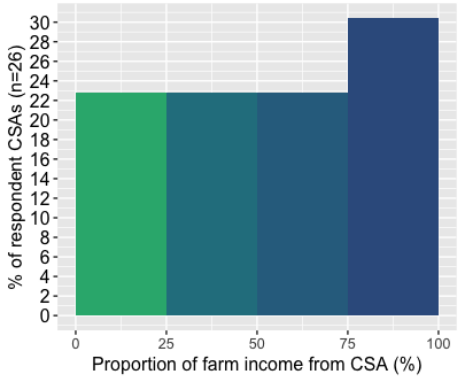
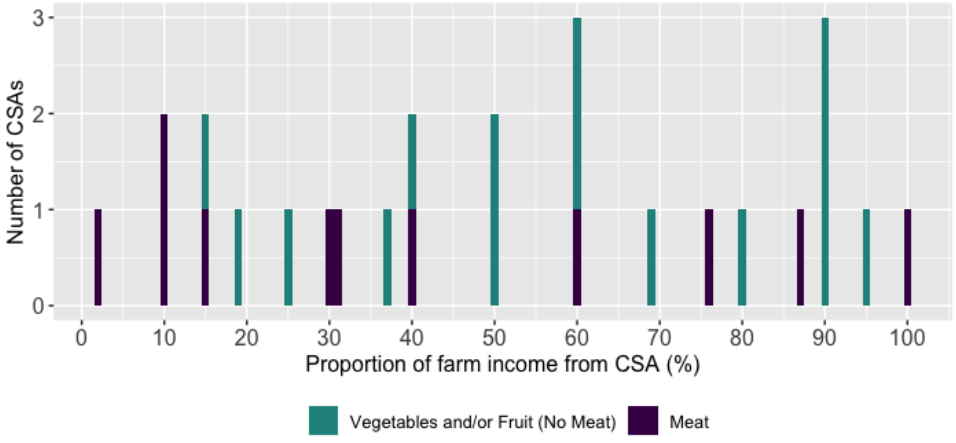



Figure 7 shows the distribution of respondents in terms of the percentage of their total farm income that was contributed by CSA, categorised by whether or not the CSA includes meat.

*Figure 7. CSA income as a proportion of total farm income, by produce type (n=26)*



## 3.2 CSA characteristics

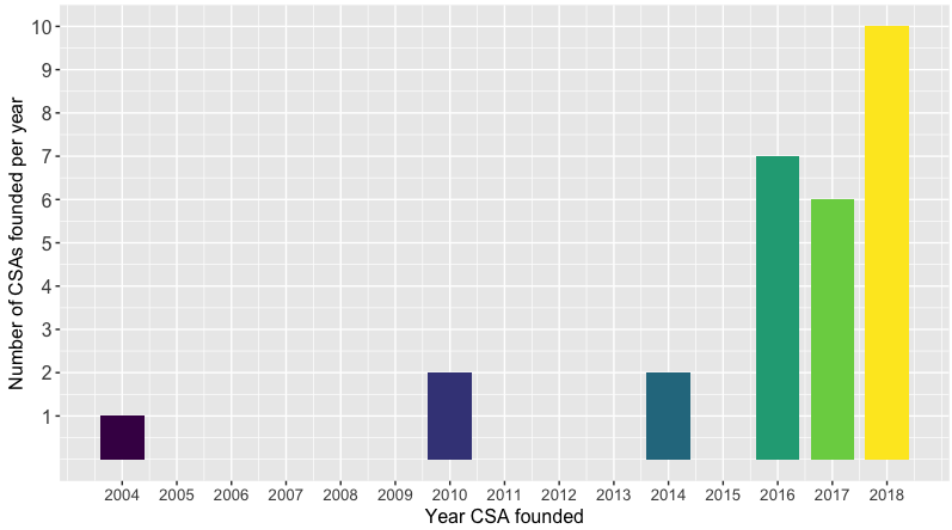
All respondents indicated that at the time of the survey they were farming as part an arrangement in which the farm exchanges produce directly with eaters (i.e. not through an intermediary), and in which risks and rewards of farming are explicitly shared with eaters.

### Establishment of CSA

Among the survey respondents, the earliest CSA was established in 2004 and the majority were established in the three years prior to the survey. This recent growth is evident in Figure 8, which plots the number of CSAs that were founded in each year since 2004.

All respondents indicated that the establishment of their CSA had been initiated by farmers, rather than by consumers, community members, or others.

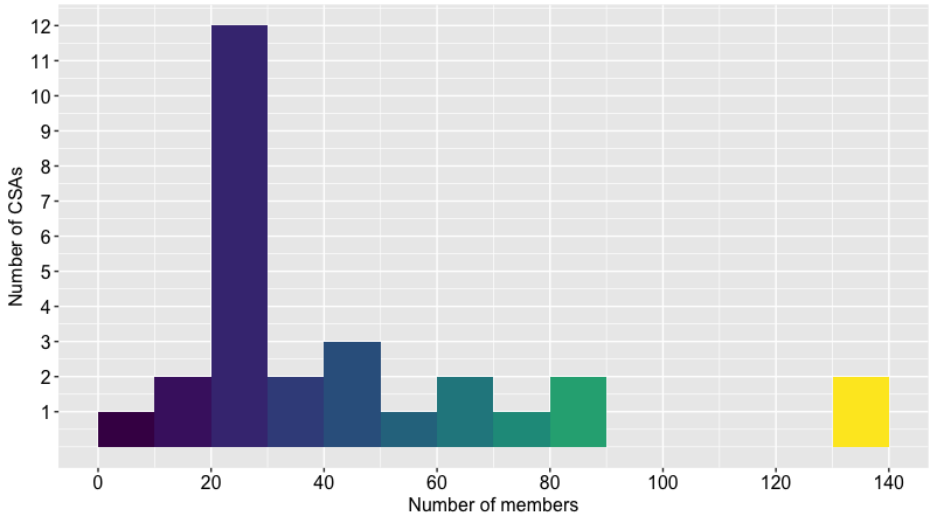
*Figure 8. Number of CSAs founded per year, by year of founding (n = 28)*




### Number of members

A variety of CSA sizes in terms of member numbers exists in Australia and Aotearoa New Zealand, as can been seen in the distribution in Figure 9. Among respondents, the smallest had 3 members and the largest had 135 members in at the time of the survey.

*Figure 9. Number of members per CSA (n = 28)*




Of the respondents who had been operating for more than one CSA season, the average proportion of members who renewed their membership from the previous season was approximately 80%. This figure is an indicative estimate only, given uncertainty around the data which were submitted in different units.

## Amount of food produced for CSA

Only about one third of survey respondents provided data on the amount (weight) of food their farm produced in the previous financial year, and more than one of those who did provide this data indicated that this was a rough estimate. Some respondents stated that they do not routinely collect weight for their produce.

Whilst weight (or mass) of food produced is a metric routinely used by agricultural and statistical agencies, it would seem that it is not an appropriate metric for CSA, where exchange takes place not on the basis of mass of a standardized homogenous product, but more in terms of diverse bundles of produce, particularly in the case of vegetable CSAs. This is exemplified by the following quote from one respondent:

> *"The earlier question about 'tonnes of food produced' is in our opinion a meaningless measure, at least for small scale veg farms like ours. Our answer was an utter guess, partly [because] we don't harvest entire crops in 1 go and [because] we do bunches etc far more than by kilo or a mixture"*

Accordingly, this data on quantity of production has not been presented. Future surveys of CSA should consider collecting a more meaningful metric of 'amount of produce', which is fit for the various types of produce and scales of farming involved in CSA, and in line with the intended value of CSA-based exchange which seeks to supply food as nutrition for communities of eaters, rather than standardized products in commoditized markets.

## Minimum period of commitment to CSA

The shortest minimum period of CSA membership was four weeks, offered by two CSAs, one of which indicated this was a 'trial' period. The longest minimum period was 12 months, offered by seven CSAs (25% of respondents), and the most popular minimum membership period was three months, with nine CSAs (32% of respondents) in this category.

## CSA share contents

As can be seen in Table 2, a majority of respondents had multiple share sizes available, and about half had extra items available to be purchased and included with the share. About a third of respondents offered various delivery/pick-up frequencies and about one in five CSAs enabled share items to be customized.

*Table 2. Numbers of CSAs with selected share characteristics*

| CSA share characteristics | Number of respondents | Percentage of respondents |
|---|---|---|
| Various delivery/pick-up frequencies are available (weekly, fortnightly, etc.) | 9 | 32% |
| Share items can be customised (i.e. members can choose/swap items) | 6 | 21% |
| Extra items can be purchased and included in the share from time to time | 14 | 50% |
| Multiple box sizes are available (e.g. full share, half shares, etc.) | 21 | 75% |

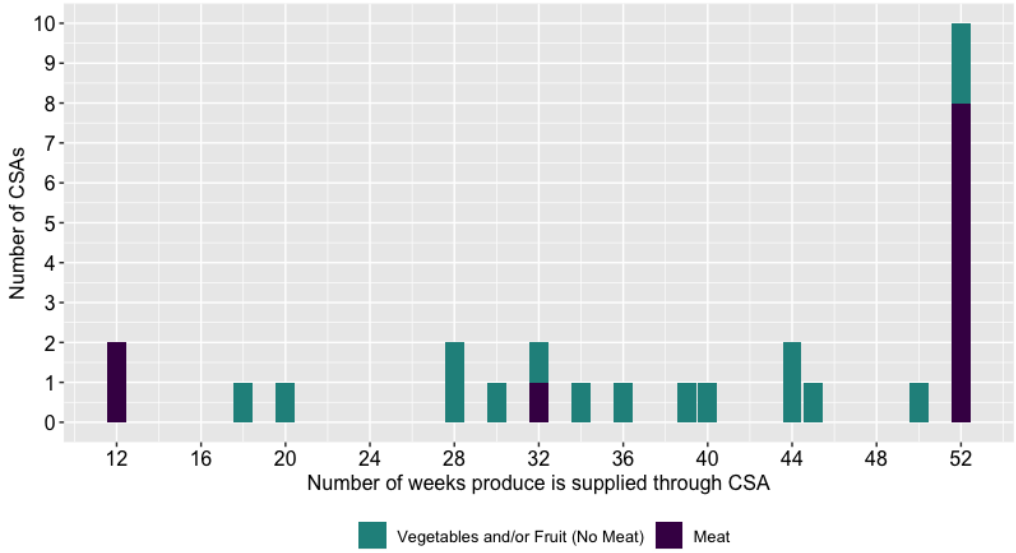
In terms of the number of different farms contributing produce for each CSA, single farm CSAs were the majority, with 86% having their CSA share produce grown/raised on their farm only, and the remaining 14% having their CSA produce grown/raised on two farms (i.e. their own farm plus one other).

Most CSAs produce their own extras, although some also source extras from other local farms. Of the 14 CSAs where extra items can be purchased, 12 produced the extra items on same farm as the CSA produce, and two had extras produced both by the same farm as the CSA produce and other local farms.

## Weeks per year produce is supplied

The number of weeks per year that respondents reported supplying produce through their CSA ranged from 12 to 52 weeks, the median being 44. Figure 10 shows the distribution of responses, with produce type indicated based on whether the CSA includes meat or not.

*Figure 10. Number of weeks per year produce is supplied through CSA (n = 27)*



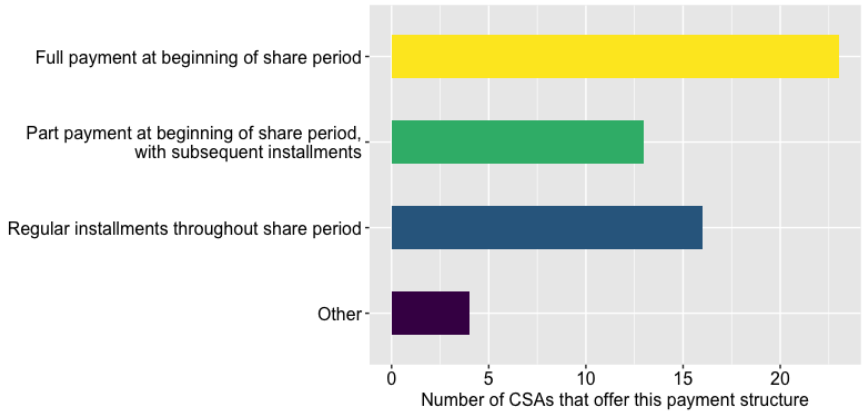

## Written agreements between farmers and eaters

Ten respondents (36%) reported that they have a written agreement to which members must commit prior to joining the CSA, and a further five (18%) stated they were planning to introduce one. The remaining 46% of respondents said they did not currently have plans to introduce a written agreement with members.

## Payment structures

Most CSAs offer more than one type of payment structure, the most widely used of which was full payment at the beginning of the share period, with 82% of respondents including this option. As can be seen in Figure 11, over half of respondents also said they accept regular installments throughout the share period, and slightly less than half accept part payment at the beginning of the share period followed by subsequent installments. The payment structures described under 'Other' included: 'Name Your Price', 'biannual', 'payment on delivery', and 'payment installments but must be paid in full by the beginning of the season'.

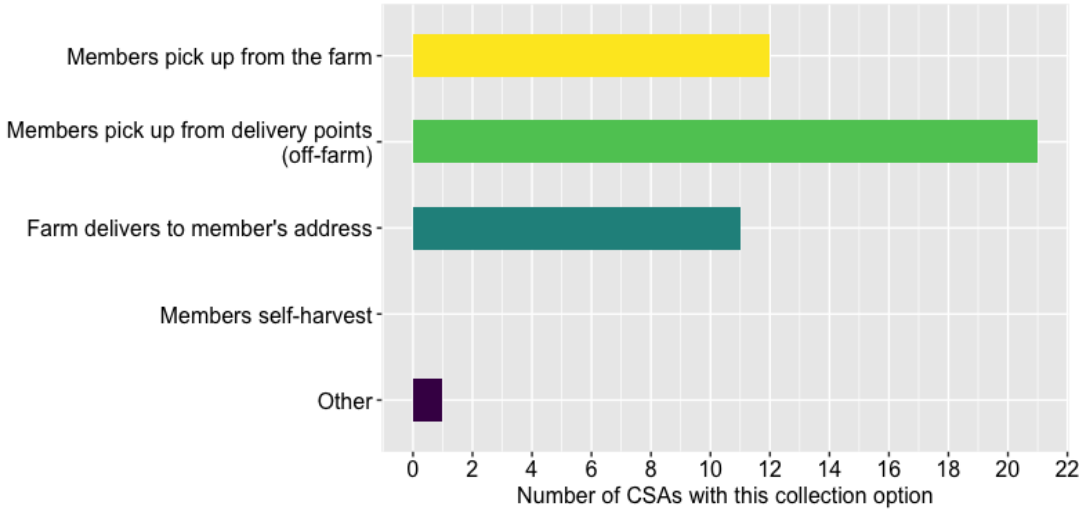
*Figure 11. Payment structures for CSA shares*



## Collection of shares

Many CSAs had multiple options available for collecting shares (Figure 12). Three quarters of respondent CSAs had off-farm delivery points from which members pick up their shares, and about 40% each had options for members to collect their share from the farm, as well as the farm delivering shares to members' addresses. In one CSA (recorded in the "Other" category in Figure 8), a group of members takes turn picking up and relocating shares to another location from where other members pick up their shares. No respondents reported having members self-harvest produce.

*Figure 12. Collection options for CSA shares – numbers of CSAs offering each option*




## Involvement of members in CSA operations

Respondents were asked to categorise the nature of their members' involvement in various aspects of the CSA operation, including: on-farm labour, administration and distribution, and planning decisions about produce.

A majority of CSAs reported not using member labour as part of on-farm operations (approximately 82%) or administration/distribution activities (approximately 82%). None of the respondents indicated having formalised groups of members, such as a 'core group' or 'steering committee', that contribute to aspects of CSA operations.

One farm reported that some members pay for their share with regular in-kind labour, and three farms reported their members contribute labour at occasional events or working bees. In terms of distribution activities, three farms indicated that whilst there isn't a formal group, some members assist with distribution when required; and two farms indicated that some members had self-organised into a group or 'hub' that took turns at collecting and distributing CSA shares.

A majority of respondent farms (61%) indicated that members did not provide input into planning decisions about produce (e.g. what to grow/raise), the remaining 39% having some degree of input from members, for example through occasional individual requests or via regular surveys of members (approximately 11% reported surveying members).

As can be seen in Table 3, in the majority of CSAs (93%) share prices are set by farmers with no involvement of members, and in one case farmers take input from members when setting the share prices. The one CSA in the "Other" category listed an approach whereby the farmer sets a minimum price and then suggests a price, but allows members to choose what to pay.

*Table 3. Price setting processes among respondent CSAs*

| Which of the following best describes how your CSA share/subscription prices are set? | Number of respondents | Percentage of respondents |
|---|---|---|
| Prices are set by the farmer only, with no involvement of members | 26 | 93% |
| Prices are set by the farmer with input from members | 1 | 4% |
| Prices are negotiated and agreed between farmer and members | 0 | 0% |
| Other *(see text for details)* | 1 | 4% |

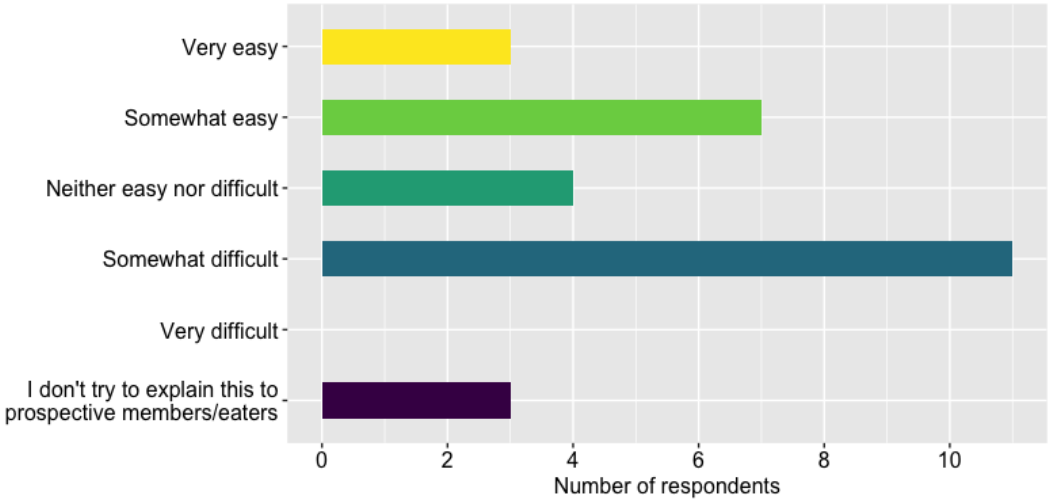
*Note: Percentages in this table don't sum to exactly 100% due to rounding.*

## Approaches to and perceptions of risk sharing

Most respondents (79%) stated the contents of their shares varied with the seasonal scarcity and/or abundance of the produce grown/raised. Of the six (21%) respondents who stated their shares do not vary with seasonal scarcity or abundance, two provided further detail that indicated they share abundance but not scarcity, and one elaborated that unforeseen events may result in "shares/boxes suffering", which indicates that scarcity is shared. Of the remaining three respondents who stated their shares do not vary with seasonal scarcity or abundance, two indicated they view the upfront payment to constitute risk sharing by members, one of whom also viewed the potential that consumers "may not like all of the food" to be a form of risk sharing. One respondent, having been operating their CSA for six months at the time of the survey, stated they do not currently share risk or reward with members.

Among the 25 respondents who discuss principles of CSA with prospective members (three respondents reported not attempting to explain these principles to prospective members), there is variation in how easy this was found to be, as illustrated in Figure 13. Roughly equal numbers of respondents find it somewhat difficult to explain, as the combination of those who find it somewhat easy or very easy to explain CSA principles.

*Figure 13. CSA farmers' perceptions of how easy it is to explain CSA principles to prospective members (n=28)*




Respondents used a variety of approaches to explain concepts of risk-sharing and solidarity. Many emphasise sharing of both risks and rewards, scarcity and abundance. Often this is framed in the context of shared ownership, membership, responsibility, belonging, community, or connection, and with reference to weather, climate and seasonality, as is illustrated in the following quotations:

> *"With a CSA, you really do own a share of the farm. If there's a bumper crop, well then you're golden, but if there are floods or drought or a pest problem,*

*you get that too. It is a risk. A CSA is not a supermarket. Consider this before joining."*

*Respondent F*

*"That it's a connection to the farm, a membership, and as such the farm produce is susceptible to weather and external factors - therefore quantities may vary depending on the seasons. Also that it's an emotional, not just physical membership, so they share in the journey - both wins and challenges."*

*Respondent K*

*"I try to explain that they are part of the farm and they have that ownership and responsibility."*

*Respondent Z*

*"That it is like they are "farming alongside us", "rain, hail or shine" and sharing the risks of the season as well."*

*Respondent I*

In contrast to those who explicitly discuss risks and evoke preparedness to share them in terms of variable quantities of produce, there are others who feel they don't use the language of risk-sharing or practices of sharing failure in terms of quantity of produce, but instead emphasise particular crop failures and risks of lower diversity of produce, as in the following quotations.

*"We do not emphasise risk-taking, however we do discuss failed crops etc. There is always something to replace that anticipated crop, so really, for us, it is more of a guaranteed outlet for produce. TBH if the farm had a disaster, we would probably refund members. Solidarity is emphasised by communicating how the early injection of funds allowed us to reinvest in infrastructure (greenhouse etc)."*

*Respondent D*

*"In reality we haven't really ever made our customers share our risk (except by not giving them as much variety as we originally planned if a particular crop fails)"*

*Respondent V*

Several respondents indicated that they use specific examples of what could happen over a CSA season, with reference to ecological realities, and what is involved in growing the specific produce in their CSA:

*"Lots of detailed examples of what it takes to grow a crop from start to finish and what can go right/wrong. Info on cost of overheads and expenses to grow vegetables organically"*

*Respondent S*

*"Changeable weather so some seasons some things might not grow well but we grow a variety of things so something should grow. Give example of our first season when we got earlier blight on tomatoes and had no tomatoes that year."*

*Respondent A*

"*Where vegetable CSA farms are vulnerable to the vagaries of weather, meat CSA farms carry the risk of low fertility leading to smaller litters, or carcass sizes varying month to month.*"

*Respondent U*

One respondent used an analogy of a magazine subscription, framing the process in terms of members relinquishing control over the details in relation to content, but simultaneously being certain of the quality and ethics involved in food production:

*"It's like a magazine subscription - you don't know what content [but] you know the genre, quality and ethics."*

*Respondent L*

Ethics and respect featured among respondents' descriptions of CSA principles, in addition to the above quotation from Respondent L. Ethics were discussed in terms of CSA enabling eaters to become informed about the ethics of production methods and make informed choices about their consumption. Ethical behavior toward farmers featured in considerations of ethics, with a few respondents also discussing ethics in terms of animals being subjects of ethical consideration. Ethics were also discussed in terms of enacting them not only in the individual relationship consumers have with their farm but also beyond that, by way of such relationships supporting broader systems change and protecting diverse food and farming practices, as evident in the following quotations:

*"In sharing some of the farmers' risk, a CSA helps connect eaters more closely to the farm and knowledge of food production. We love working with a community of CSA members who truly know our farm and share our ethics. By deepening eaters' understanding of food production, especially animals raised for meat, we figure we can have a bigger impact as you share that knowledge with others."*

*Respondent U*

*"Model of mutual benefit, respect and support. Keeps small farms viable and producing the kind of food many want to eat and protects diversity in food & farming practices, because of even playing field of sharing the abundance and the risk."*

*Respondent M*

*"By explicitly describing the risk of a small harvest (ie. they will receive less produce)…they are participating in a solidarity economy. By also encouraging that they 'support' local agroecological farmers over industrial systems."*

*Respondent Q*

The following quotation from Respondent X is an exemplar of several other respondents' approaches that combine many of the above themes in their explanation of CSA principles, including specific details of potential risks, emphasizing the sharing of both scarcity and abundance, ecological variables influencing food production, greater connection and stability for farmers, and the agency of consumers to support food production in line with various ethics or values.

*"Farming has risks. Box customers are champions of organic agriculture, food and local business. You're part of eating a different story. Your support over a long period gives me stability to get on with planting and growing knowing*

*I've got tummies ready to feed from abundant ripe harvest…If we get a great yield on our urban farming, you receive some of that overflow but, an early cold snap day means our first succession of summer goodies are at risk, and instead of the farmer taking all this risk, we all share. The model means the farmers are not isolated by natural outlying variables we can't plan for. In my experience working and seeing several other CSA farms, the customer often scores and the farmer is happy to be supported by the community…"*

*Respondent X*

## 3.3 Farmer characteristics

Respondents were asked about demographic details for up to three of the main farmers in their CSA; 28 respondents provided one or more details about 'Farmer A', and 20 provided one or more details about 'Farmer B', which were used to construct profiles in Tables 4 and 5 for each of the two 'main farmers'. Three respondents included data for 'Farmer C' and, given the small sample size, descriptive statistics have not been reported as part of a separate 'Farmer C' profile, however their data was included in the aggregate results for CSA farmers.

Data provided for the three main farmers ('Farmers A, B, and C') was combined and analysed to give aggregate descriptive statistics taken to be indicative of CSA farmers active in respondent CSAs in the 2017-18 financial year. The gender distribution of these 51 farmers was 41% female, 59% male, and 0% non-binary or other gender.

Figure 14 shows the distribution of ages of 51 farmers who worked on respondent CSA farms, which ranges from 25 to 64 years of age, with a median of 39 years and a mean of 40 years.

*Figure 14. Age distribution of main farmers (n = 51) from respondent CSA farms*

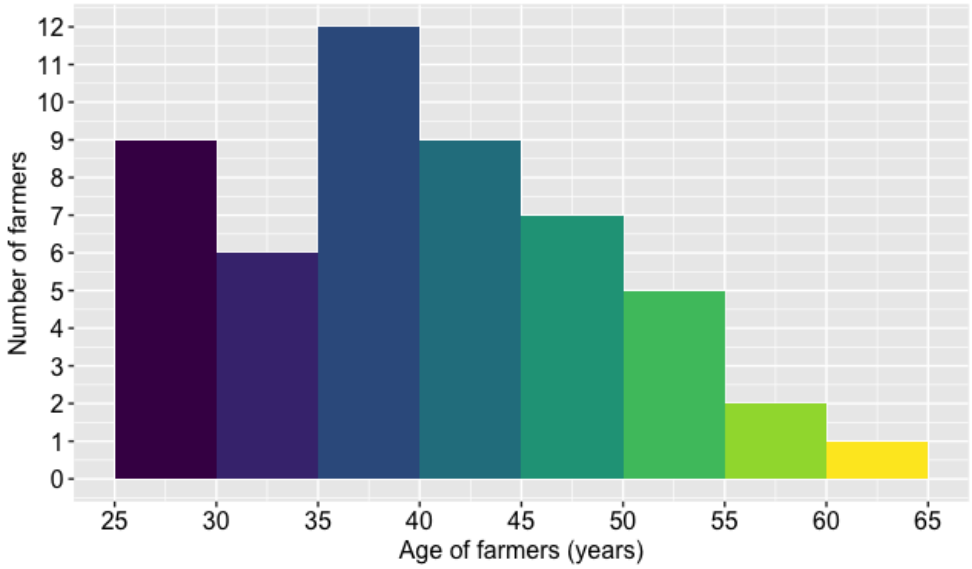


*Table 4. Profile of 'Farmer A'*

| | Mean | Standard Deviation | Range |
|---|---|---|---|
| Age (years, n = 28) | 39 | 9.0 | 25 – 59 |
| Years farming (years, n = 27) | 8.7 | 9.1 | 1 – 40 |
| Years as CSA farmer (years, n = 27) | 3.1 | 3.5 | 0.5 – 15 |
| Hours per week farming (hours, n = 26) | 50.8 | 17.9 | 15 – 90 |
| Hours per week earning off-farm income (hours, n = 20) | 5.7 | 10.6 | 0 – 40 |
| | | | Percentage of respondents |
| Hours per week unpaid domestic labour (n=23) | 30 hours or more:<br>15 to 29 hours:<br>5 to 14 hours:<br>Less than 5 hours:<br>Nil: | | 4%<br>17%<br>35%<br>39%<br>4% |
| Hours per week voluntary community/industry work (n=20) | 5 to 14 hours:<br>Less than 5 hours:<br>Nil: | | 5%<br>45%<br>50% |
| Gender (n=28) | Female:<br>Male: | | 29%<br>71% |
| Highest education (n=28)<br>*There was a mix of subject areas in the formal education listed by farmers, including those related to agriculture, horticulture, and farm management, as well as other diverse areas among which education and health sciences featured notably.* | Postgraduate degree:<br>Graduate diploma/certificate:<br>Bachelor degree:<br>Certificate III or IV:<br>Year 10, 11 or 12: | | 18%<br>14%<br>39%<br>18%<br>11% |

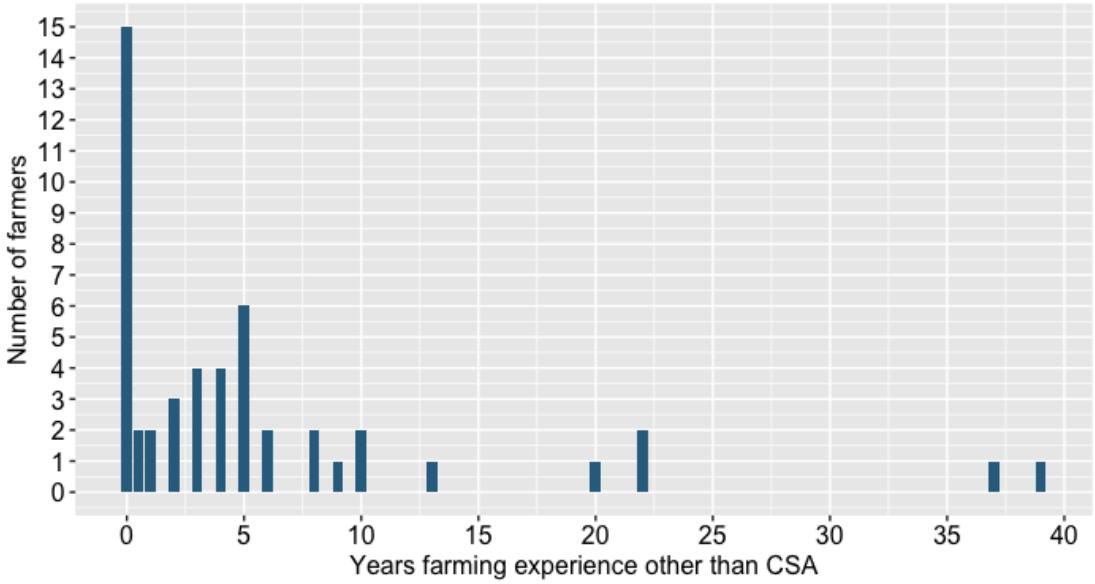
*Table 5. Profile of 'Farmer B'*

| | Mean | Standard Deviation | Range |
|---|---|---|---|
| Age (years, n = 20) | 41 | 9.6 | 26 – 64 |
| Years farming (years, n = 20) | 9.9 | 9.6 | 1 – 38 |
| Years as CSA farmer (years, n = 20) | 3.5 | 4.0 | 0.5 – 15 |
| Hours per week farming (hours, n = 19) | 33.5 | 21.6 | 2 – 80 |
| Hours per week earning off-farm income (hours, n = 17) | 15 | 17.7 | 0 – 46 |
| | | | Percentage of respondents |
| Hours per week unpaid domestic labour (n=16) | 30 hours or more:<br>15 to 29 hours:<br>5 to 14 hours:<br>Less than 5 hours:<br>Nil: | | 6%<br>12%<br>50%<br>12%<br>19% |
| Hours per week voluntary community/industry work (n=14) | 15 to 29 hours:<br>5 to 14 hours:<br>Less than 5 hours:<br>Nil: | | 14%<br>14%<br>21%<br>50% |
| Gender (n=20) | Female:<br>Male: | | 60%<br>40% |
| Highest education (n=20)<br>*A similar pattern of subject areas was observed to that of 'Farmer A', although relatively fewer were directly related to agriculture.* | Postgraduate degree:<br>Graduate diploma/certificate:<br>Bachelor degree:<br>Certificate III or IV:<br>Year 10, 11 or 12: | | 15%<br>20%<br>45%<br>5%<br>15% |

For the CSA farmers for which there was data on the duration of their experience in farming, (n = 50) their total farming experience ranged from 1 to 40 years, with a median of 5.5 years and average of 8.7 years. On aggregate, the 'total farming years' experience held among respondent CSA farmers in Australia and Aotearoa New Zealand is at least 435 years.

For the CSA farmers for which there was data on the duration of their experience with CSA farming (n = 49) the CSA experience ranged from 0.5 to 15 years, with a median of 2 years and average of 3.2 years. On aggregate, the 'CSA farming years' experience held among farmers in respondent CSA farms in Australia and Aotearoa New Zealand is at least 157 years. Figure 15 shows the distribution of duration of non-CSA farming experience of these 49 farmers, which gives an indication of the years of farming experience prior to commencing CSA farming; this ranged from 0 to 39 years, with a median of 3 years. Figure 15 suggests that about 30% of farmers in respondent CSAs commenced farming and CSA concurrently, i.e. they started CSA without prior farming experience.

*Figure 15. Years of non-CSA farming experience of main farmers (n=49) from respondent CSAs*




## 3.4 Farmer sentiments about their farm and CSA

Respondents were asked how satisfied they were with various aspects of their farm overall, and the extent to which their CSA operation affected these aspects of their farm. Results of these questions are presented in Figures 16 and 17, as percentages of respondents in each satisfaction category (Very dissatisfied, Dissatisfied, Neither satisfied nor dissatisfied, Satisfied, Very satisfied) or effect category (Strongly worsens, Worsens, No effect, Improves, Greatly improves) respectively for each aspect of their farm.

The aspect of their farm that respondents felt most satisfied with was their ability to maintain or improve soil quality, with 96% either satisfied or very satisfied, and no respondents dissatisfied or very dissatisfied. This was closely followed by the variety of tasks in farmer workload, with 93% either satisfied or very satisfied, and no respondents dissatisfied or very dissatisfied. A greater proportion of respondents felt satisfied or very satisfied with farmer quality of life (68%) than those who felt either dissatisfied or very dissatisfied (7%), or those who were neither satisfied nor dissatisfied (25%).

The lowest levels of overall satisfaction were experienced in relation to 'Financial security for farmer (including health insurance, retirement, etc.)', with only 15% either satisfied or very satisfied, and 59% either dissatisfied or very dissatisfied. Similarly, relatively low levels of overall satisfaction were observed for 'Farmer compensation', with 26% either satisfied or very satisfied, and 56% either dissatisfied or very dissatisfied.

*Figure 16. CSA farmer satisfaction with various aspects of their farm overall*

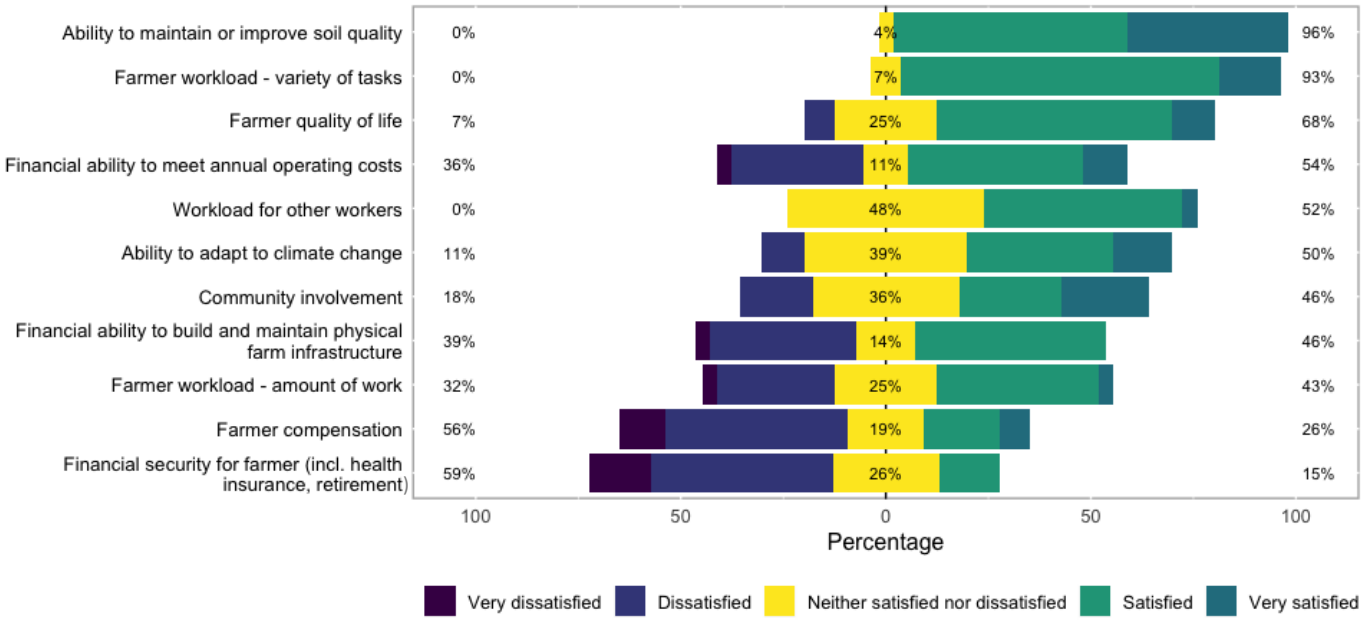
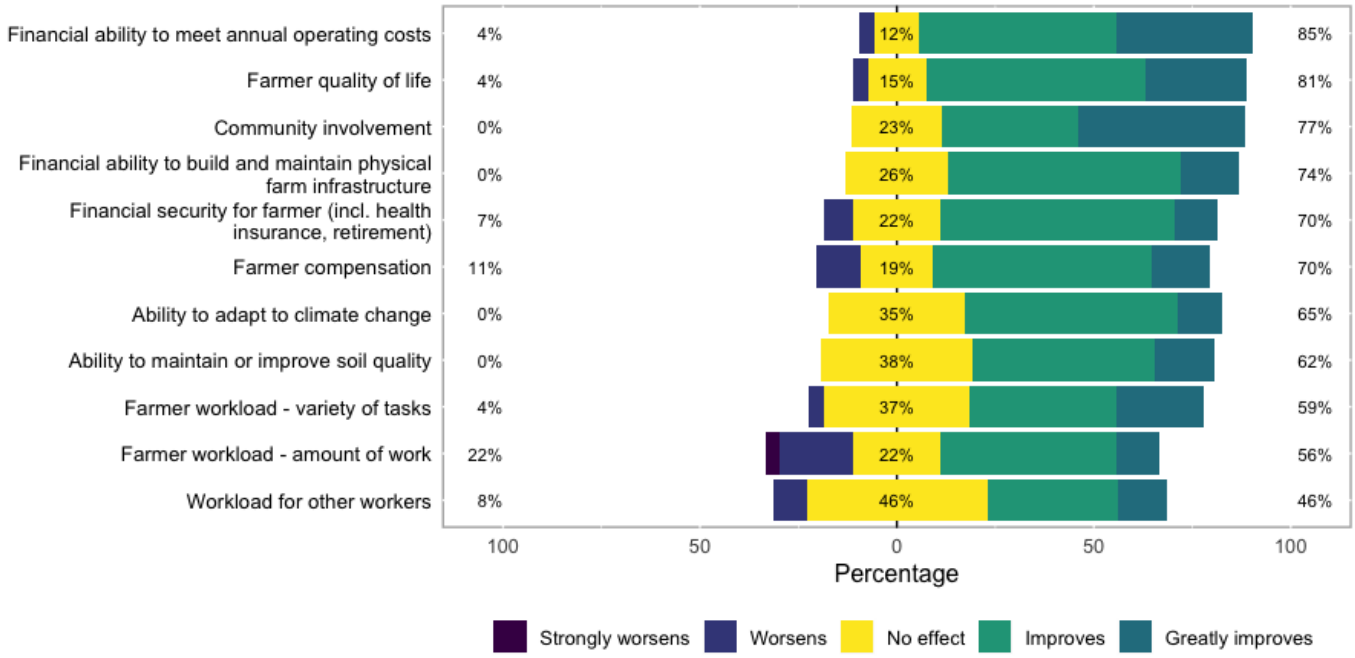



*Figure 17. CSA farmer assessment of how their CSA affects aspects of their farm*




*Note: Not all rows in Figure 17 sum to exactly 100% due to rounding*

The aspects that respondent farmers felt CSA had the largest improvement on were their financial ability to meet annual operating costs and quality of life, both of which had upwards of 80% of respondents report these were either improved or greatly improved by their CSA operation. Similarly, 77% of respondents reported that CSA improved or greatly improved

their sense of involvement in the community, and no respondents reported this was worsened. With the exception of 'Workload for other workers', in all of the other aspects assessed, more respondents felt that CSA improved (or greatly improved) their situation than thought either worsened or had no effect on their situation.

The aspect with the highest percentage of respondents (22%) indicating it was worsened or strongly worsened by their CSA, was 'Farmer workload – amount of work'. This is contrasted with 22% who said it had no effect, and a combined 56% who said CSA either improved or greatly improved the amount of farmer workload. Comparing this with responses in regard to 'Farmer workload – variety of tasks', shows that a similar percentage (59%) feel CSA either improves or greatly improves the variety and amount of their workload, while fewer believe it worsens their workload variety (4%), and a greater proportion feel it has no effect on variety (37%) compared with those for amount of work. Understanding this diversity in how CSA workload impacts are experienced differently by different farmers, both in terms of amount and variety, is a priority for further study.

Notably, only one respondent said that CSA strongly worsened any of the eleven aspects of their farm that were asked about: this aspect was 'Farmer workload – amount of work'.

## Social relationships

Several questions were included in the survey to explore social identity concepts of closeness between various groups. The pictorial overlap measures (described briefly in Section 2.1, and versions of which are reproduced at Figures 18a and 18b), have been validated as correlating with perceived similarities and differences between groups, and with subjective interpretation of belonging to a group.[2]

Respondents were asked to select the diagram that best represented the closeness of various groups to each other (A to G in Figure 18a, where the two large circles represented specified groups), as well as themselves to various groups (A to G in Figure 18b, where the small circle represented the respondent and the large circle represented the specified group). Respondents were asked about the group-to-group closeness of: farmers and consumers generally; and CSA farmers and CSA members. Respondents were asked about their personal closeness to the following groups: consumers generally; their CSA members; their other (non-CSA) consumers; CSA farmers; and farmers generally.

All but one respondent felt that CSA farmers and members were closer than farmers and consumers generally, whereas one respondent felt there was no difference in the closeness of CSA farmers and members, compared with farmers and consumers generally. The most popular choice representing the closeness of farmers and consumers generally corresponded to diagram A in Figure 18a, whereas the most popular choice representing the closeness of CSA farmers and CSA members corresponded to diagram D in Figure 18a.

Approximately 70% of respondents who had both CSA and non-CSA consumers indicated they felt closer to their CSA members than their non-CSA consumers. Whereas approximately 22% felt equally close to both CSA members and other (non-CSA) consumers, approximately 7% felt closer to their other (non-CSA) consumers than their CSA consumers. The most frequent choice for closeness to farmers' own CSA members corresponded to diagram D in Figure 18b,

[2] Thomas W. Schubert and Sabine Otten, "Overlap of Self, Ingroup, and Outgroup: Pictorial Measures of Self-Categorization," *Self and Identity* 1, no. 4 (October 2002): 353–76, https://doi.org/10.1080/152988602760328012.

whereas the most frequent choice for closeness to farmer's other (non-CSA) consumers corresponded to diagram C in Figure 18b.

*Figure 18a. Pictorial measures of closeness <u>between</u> social groups*

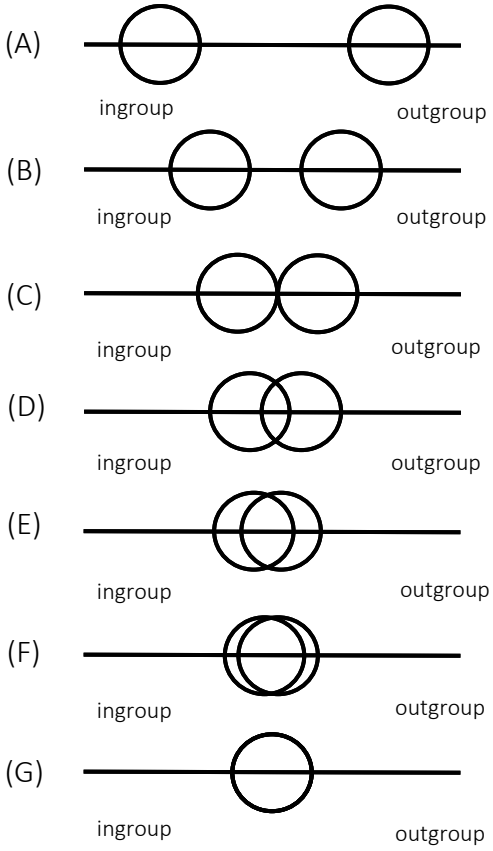
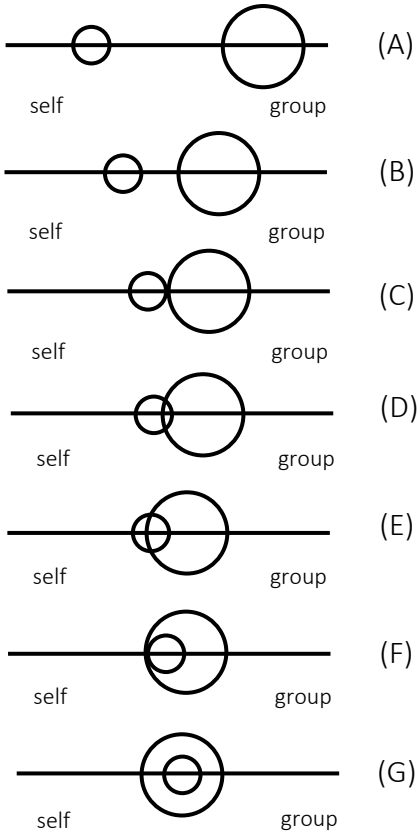



*Figure 18b. Pictorial measures of closeness <u>within</u> social groups*




Approximately 14% of respondents identified equally strongly with farmers generally as with CSA farmers. Whereas approximately 65% identified more strongly with CSA farmers than farmers generally, the remaining approximate 21% identified more strongly with farmers generally than they did with CSA farmers.

## Challenges and rewards of CSA farming

Respondents were invited to describe what they find most challenging and most rewarding about their involvement in CSA.

Overwhelmingly the strongest themes among what respondents find most rewarding about CSA were connection and personal relationships with members, and the various benefits and support that flow from those relationships and interactions, as articulated by Respondent M:

> *"The connection with our members, the added variety and manageability it has brought to our farm/life and the best prospect of us viably remaining as farmers - financially, physically and emotionally."*
>
> *Respondent M*

One particular aspect of the interactions afforded by the CSA relationship that several respondents described as beneficial was the ability to receive direct and rapid feedback from eaters about the produce, as illustrated in the following comments:

> *"I like the face to face time with members each week. Their ability to provide real time feedback on what they liked and didn't like."*
>
> *Respondent F*

> *"[G]reat feedback on the quality and freshness of the food"*
>
> *Respondent N*

> *"Growing amazing organic produce for people who understand the importance of locally produced food. The support and feedback in my private facebook group, the sense of community with members sharing recipes and ways they have used their box contents is fun."*
>
> *Respondent Y*

The integration with community and educational role of CSA were echoed by several respondents as being among the most rewarding aspects of CSA:

> *"The connections that a farmer can build to their customers and the ability to greater inform customers about the realities of farming, and of supply and the challenges of farming during difficult seasons."*
>
> *Respondent I*

Similarly, the opportunity to influence change in the broader food system and economy was articulated among several respondents' sense of the rewarding aspects:

> *"That it is creating an alternative economy and building food sovereignty."*
>
> *Respondent Q*

> *"Involvement in the CSA movement, variety of tasks, knowing the people we are feeding - more connection. Opportunity to promote ways to change the food system."*
>
> *Respondent C*

> *"Community - teaching, learning, sharing, support, encouragement, radically transforming the food system one member at a time."*
>
> *Respondent U*

Some respondents spoke of their role as a farmer as being strongly integrated with their identity and way of life, in particular their capacity to care for and provide for their members, their family, and the environment.

> *"Everything as a whole, it is our way of life!"*
>
> *Respondent AC*

> *"Caring for the land and feeding my children healthy food."*
>
> *Respondent R*

> *"Growing food for people I get to establish a relationship with and being their farmer."*
>
> *Respondent* X

In terms of challenges, additional workload and logistics were recurrent themes among the responses, as were finding new members and, to a lesser extent, retaining existing members. An extension of these were challenges around educating prospective members, managing expectations about CSA and food, and communicating with members. It is worth noting that workload featured both in the things farmers found most challenging *and* most rewarding about CSA: whilst some respondents indicated CSA increased their workload, others said the reduction in workload was among the greatest rewards. This diversity is consistent with the quantitative findings in relation to the effects of CSA on various aspects of respondents' farms (see Figures 16 and 17 and related text). Reasons for the contrasting experiences of different farmers in relation to workload are a priority for exploring in future qualitative research.

A sense of pressure and responsibility were also common themes among the challenges expressed by respondents. Particularly in relation to production, several vegetable CSAs mentioned the challenge of growing sufficient variety or diversity of produce. Overall, pressure was described in terms of meeting expectations around the produce itself, as well as around the interpersonal interactions with CSA members, as is illustrated by the following quotations:

> *"Having to produce food every month no matter what because people have paid. It's a bigger responsibility than going to farmers markets."*
>
> *Respondent G*

> *"Expectation from self regarding quantity; variety; being personable; creating an experience that people enjoy."*
>
> *Respondent D*

> *"The lack of flexibility - it's a big ongoing commitment for the farmer as well as the customer. I can skip a market if I'm sick or because of severe weather but I never feel like I can skip a week of veggie boxes because they're pre-paid and there's such strong expectations and relationships involved."*
>
> *Respondent H*

Some respondents expressed concern regarding a sense of inauthentic practices or co-optation of the CSA concept by others, and the potential for this to negatively impact their own endeavours and the CSA movement more broadly. The following two comments (attribution withheld) illustrate the presence of this concern and also echo the existence of different interpretations of what 'risk sharing' means among practitioners of CSA (discussed in section 3.2 above).

> *"I have other farms in the area that claim to be CSA's but really don't follow the model and undercut the prices I can operate at dramatically"*

> *"Something I find worrying about the CSA movement is the tendency for greenwashing by retailer/resellers who market as a CSA but are not, and farmers who do the same thing and dilute the concept by not asking their members to share risk nor commit to a season."*

A further concern was expressed in relation to the challenges posed by the broader context in which CSA is practiced, particularly a perception of apathy and general community attitudes and values regarding food and food production, as articulated in the following comment:

*"[T]he general lack of understanding in the local community of where food comes from, ambivalence to consuming food that has zero nutritional value and at worst is causing sickness and disease, and the benefits that a strong and healthy local food system could have for the future."*

*Respondent R*

Other aspects that were listed as challenging include: government regulations, achieving increased CSA sales, and turning people away once all available CSA shares have been filled.

Considering the rewards and challenges described above collectively, the following comment illuminates the dual impact of the interpersonal relationships involved in being a CSA farmer; whilst these relationships feature overwhelmingly among the greatest rewards farmers report of their involvement in CSA, they are also the source of some of their greatest challenges in terms of the expectations they seem to create, from self and CSA members, and the concomitant pressure to meet these expectations.

*"The long-term relationships with customers that really become friendships as people come back year after year. The very immediate and enthusiastic feedback. The social experience of pick-up day, which is 100% more enjoyable than a market because there's no pressure to sell anything. I can just wholeheartedly enjoy the interactions with my customers and feel really integrated into the community as a farmer.*

*It's hugely rewarding and creates really important financial stability, but it's also a lot of pressure. I think a CSA is something farms should evolve into rather than try to launch when they're just getting started."*

*Respondent H*

This insight is particularly instructive when considered alongside the earlier finding (section 3.3) that just under one-third of respondents began CSA at the same time they started farming.

## Future plans

The majority of respondents (82%) indicated they planned to continue their CSA in the following year, with 7% planning to cease their CSA, and a further 11% undecided (Table 6).

*Table 6. CSA farmer plans regarding continuing CSA in the next year*

| Response | Number of respondents | Percentage of respondents |
|---|---|---|
| Yes | 23 | 82% |
| No, but I'll keep farming and sell via other methods | 2 | 7% |
| No, I'll leave farming altogether | 0 | 0% |
| Undecided | 3 | 11% |

Respondents who indicated they would not continue their CSA but would continue farming gave reasons including the resource intensity of CSA, particularly labour, as well as financial constraints. In one case, financial reasons prompted a farmer to seek additional employment that would preclude them from being able to operate their CSA in the current season, however they indicated a desire to resume CSA in future where possible.

The implication of labour intensity of CSA being a factor for one respondent in their decision to discontinue CSA but continue farming, is reflected in the earlier findings of 'Farmer workload – amount of work' having the highest percentage of respondents (19%) indicating it was worsened by their CSA, and the third lowest level of overall satisfaction (43% satisfied or very satisfied, and 33% either dissatisfied or very dissatisfied with the amount of farmer workload) after 'Financial security for farmer (including health insurance, retirement, etc.)' and 'Farmer compensation' respectively at 25% and 15% combined satisfied and very satisfied.

Conversely, that 82% of respondents indicate an intention to continue their CSA is consistent with findings presented in Figure 17 showing that CSA collectively makes a greater positive impact, than negative or neutral impacts, across a number of key aspects of respondents' farms overall.

# 4 Closing remarks

Whilst this report provides only a brief snapshot of some of the CSA farms practicing in Australia and Aotearoa New Zealand, it is hoped that it nonetheless provides a useful first insight into the extent of both diversity and commonality that currently exists within these CSA farms, and a starting point from which to chart the future development of the CSA movement in the region.

It is the author's intention to conduct further analysis of the data collected through this survey; a particular priority is to explore the existence of any potential correlations between levels of farmer satisfaction or impact of CSA with other aspects covered in the survey.

Areas for further exploration in future studies include how workload volumes and variety are experienced differently by different CSA farmers, with a view to understanding what may assist reduce the workload burden for CSA farmers, and what personal attributes, values, and expectations lend themselves to better enjoyment of CSA farming. Additionally, exploring CSA members' experiences of CSA will help broaden the understanding of CSA in the region. It is hoped that the information presented in this report provides a basis for such further studies and contributes to a body of knowledge that can support decision-making by current CSA participants and supporters, as well as farmers and eaters who are considering becoming involved in CSA.